

# **AIR FORCE QUALIFICATION TRAINING PACKAGE (AFQTP)**



for  
UTILITIES SYSTEMS  
(3E4X1)

## **MODULE 26**

### **AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES**

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## MODULE 26

### AFSC SPECIFIC CONTINGENCY RESPONSIBILITIES

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Career Field Education and Training Plan (CFETP) references from 1 Apr 97 version.
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OPR: HQ AFCESA/CEOT

Certified by: HQ AFCESA/CEO  
(Colonel Lance C. Brendel)

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**AIR FORCE QUALIFICATION TRAINING PACKAGES**  
**for**  
**UTILITIES SYSTEMS**  
**(3E4X1)**

**INTRODUCTION**

*Before starting this AFQTP*, refer to and read the “Trainee/Trainer Guide” located on the AFCESA Web site <http://www.afcesa.af.mil/>

*AFQTPs are mandatory and must be completed* to fulfill task knowledge requirements on core and diamond tasks for upgrade training. *It is important for the trainer and trainee to understand* that an AFQTP ***does not*** replace hands-on training, nor will completion of an AFQTP meet the requirement for core task certification. AFQTPs will be used in conjunction with applicable technical references and hands-on training.

*AFQTPs and Certification and Testing (CerTest) must be used as minimum upgrade requirements for Diamond tasks.*

**MANDATORY minimum upgrade requirements:**

***Core task:***

AFQTP completion  
Hands-on certification

***Diamond task:***

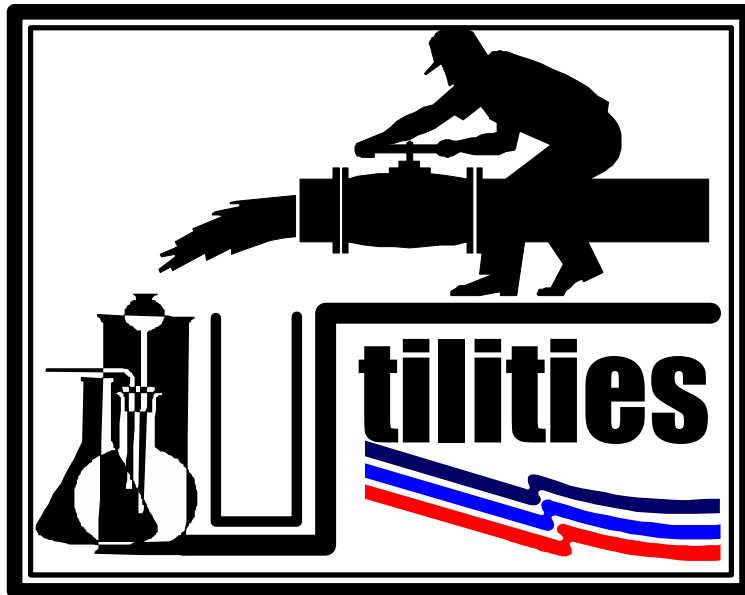
AFQTP completion  
CerTest completion (80% minimum to pass)

**Note:** *Trainees will receive hands-on certification training for Diamond Tasks when equipment becomes available either at home station or at a TDY location.*

***Put this package to use.*** Subject matter experts under the direction and guidance of HQ AFCESA/CEOT revised this AFQTP. If you have any recommendations for improving this document, please contact the Career Field Manager at the address below.

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## THE WATER DISTRIBUTION SYSTEM

**MODULE 26**

**AFQTP UNIT 3**

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**SET UP (26.3.1.1.2.)**

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## SET UP

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.1.1.2, Setup
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Harvest Eagle Water Distribution System, 3E4X1-26.3.1.1C</li> <li>• TO 40W4-14-1, Harvest Eagle Water Distribution System</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC.</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Raw water component kit, potable water component kit, and wastewater component kit.</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of the Harvest Eagle Water Distribution System set up.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name all subsystems of Harvest Eagle Water Distribution System.</li> <li>• Trainee will be required to know steps to perform set up of the Harvest Eagle Water Distribution System.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

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## SET UP

**Background:** The Harvest Eagle (HE) water distribution system is a deployable utilities kit designed to provide basic living necessities to an air wing in field conditions. It provides for water treatment, storage, distribution and wastewater collection for field latrines, showers, laundries and kitchens. One HE water distribution system is designed to support a 550 person deployment. The Harvest Eagle water distribution system is set up from three subsystems:

- Raw water component kit.
- Potable water component kit.
- Wastewater component kit.

You **must** follow the detailed procedures in TO 40W4-14-1, *Harvest Eagle Water Distribution System*, when setting up the kit. The number of systems, subsystems, and individual components requires specific step-by-step procedures when unpacking and assembling the HE kit.

**NOTE:**

TO 40W4-14-1, *Harvest Eagle Water Distribution System*, must be on-hand prior to conducting hands-on training.

***To perform these tasks, complete the lesson(s) in CD-ROM, HARVEST EAGLE Water Distribution System, 3E4X1-26.3.1.1C.***

**NOTE:**

In the **CD-ROM**, there are tests after each section. Complete each section and answer the questions.

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### SET UP

Performance Checklist		
Step	Yes	No
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is used for the Harvest Eagle Water Distribution System?		
3. Did trainee understand each function of the HE subsystem?		
4. Did the trainee know the purpose of the Harvest Eagle Water Distribution System?		
5. Did the trainee understand the principals of set up?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## THE WATER DISTRIBUTION SYSTEM

**MODULE 26**

**AFQTP UNIT 3**

**TROUBLESHOOTING (26.3.1.1.3.)**

**REPAIRS (26.3.1.1.4.)**

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**TROUBLESHOOTING****REPAIRS*****Task Training Guide***

<b>STS Reference Number/Title:</b>	26.3.1.1.3., Troubleshooting 26.3.1.1.4., Repairs
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, HARVEST EAGLE Water Distribution System, 3E4X1-26.3.1.1C</li> <li>• TOs 00-105K1, 36A11-20-4-3, 37A12-1-121; TM5-4320-220-12&amp;P</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Use common hand tools normally available to field units</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of Troubleshooting the Harvest Eagle Water Distribution System.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to identify, troubleshoot and repair common problems of the HE system.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions.</li> <li>• Any safety violation is an automatic failure.</li> </ul>	

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## TROUBLESHOOTING

### REPAIRS

**Background:** For the most part, the field deployable systems will operate with few problems (if maintained properly); however, “Murphy’s Law”, or “what can go wrong will go wrong”, must be considered in the same breadth of mechanical equipment. The following tables depict some of the items that could occur, its probable cause(s), and how you can attempt to fix it. The components discussed are the bubbler assembly, the 125 GPM water pumps, the 10K water storage tanks, back pressure regulators, the hypochlorination unit, the 35 GPM water disposal pumps, hose assemblies and associated fittings. Refer to Figure 1 to see how each item assembles together for the raw water component kit.

*To perform these tasks, complete the lesson(s) in CD-ROM, HARVEST EAGLE Water Distribution System, 3E4X1-26.3.1.1C.*

**NOTE:** After completing all lessons for HE Water Distribution System, see your Unit Education and Training Manager to take the following **mandatory** Certest.

**Test no.**  
**8079**

**Title**  
**Harvest Eagle Water Distribution System**

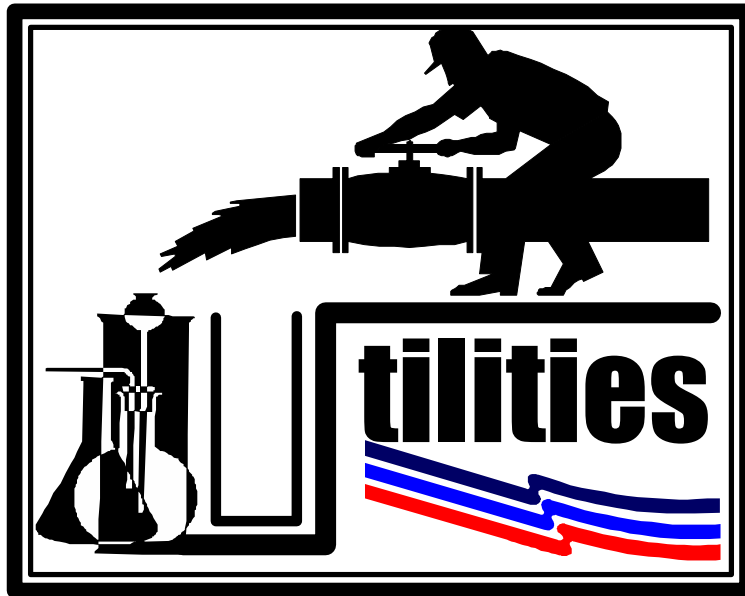
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**TROUBLESHOOTING****REPAIRS**

<b>Performance Checklist</b>		
<b>Step</b>	<b>Yes</b>	<b>No</b>
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is used for the Harvest Eagle Water Distribution System?		
3. Did trainee understand each function of the HE subsystem?		
4. Did trainee understand color code system?		
5. Did trainee know how the ROWPU system fits into the HE system?		
6. Did the trainee know the purpose of the hypochlorination unit?		
7. Did the trainee know the purpose of the Harvest Eagle Water Distribution System?		
8. Did the trainee understand principals of trouble shooting and repair?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## PORTABLE SHOWER UNIT (M1958) & (PBU100)

MODULE 26

AFQTP UNIT 3

### SET UP (26.3.2.4.1.)

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## SET UP

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.4.1., Set up
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Bath Unit &amp; Shower Facility, 3E4X1-26.3.2.4C</li> <li>• TO 35E35-5-1</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of the Bath Unit &amp; Shower Facility set up.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the Bath Unit &amp; Shower Facility.</li> <li>• Trainee will know steps to perform set up of the Bath Unit &amp; Shower Facility.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

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## SET UP

**Background:** A hot shower while deployed can boost morale. It will be up to you to ensure the shower unit is set up and operates correctly. There is little maintenance on the shower unit if you have performed proper set up. One complete shower and shave unit supports up to 275 people.

*To perform these tasks, complete the lesson(s) in CD-ROM, Bath Unit & Shower Facility, 3E4X1-26.3.2.4C*

**NOTE:** After completing this lesson, see your Unit Education and Training Manager to take the Following **mandatory** Certests:

<b><u>Test no.</u></b>	<b><u>Title</u></b>
<b>8049</b>	<b>PBU100 Bath &amp; M1950 Shower QTP – Lesson 1</b>
<b>8052</b>	<b>PBU100 Bath &amp; M1950 Shower QTP – Lesson 4</b>
<b>8053</b>	<b>PBU100 Bath &amp; M1950 Shower QTP – Lesson 5</b>

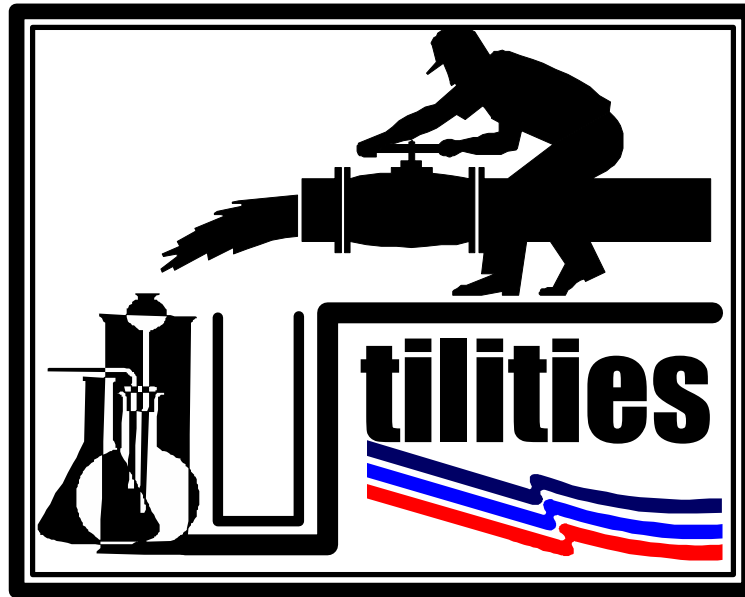
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SET UP

Performance Checklist		
Step	Yes	No
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is to be used for the Bath Unit & Shower Facility?		
3. Did trainee understand how to setup components of the kit?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## **PORTABLE SHOWER UNIT (M1958) & (PBU100)**

**MODULE 26**

**AFQTP UNIT 3**

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**PERFORM OPERATIONAL TESTS (26.3.2.4.2.)**

**SERVICE/PERIODIC MAINTENANCE (26.3.2.4.3.)**

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## PERFORM OPERATIONAL TESTS SERVICE/PERIODIC MAINTENANCE

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.4.2., Perform Operational Tests 26.3.2.4.3., Service/Periodic Maintenance
<b>Training References:</b>	<ul style="list-style-type: none"> <li>CD-ROM, Bath Unit &amp; Shower Facility, 3E4X1-26.3.2.4C</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>Possess as a minimum a 3E431 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>Trainee will have the knowledge to perform operational tests on the Bath Unit &amp; Shower Facility.</li> <li>Trainee will have the knowledge to perform service/periodic maintenance on the Bath Unit &amp; Shower Facility.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>Trainee will be able to name major components of the Bath Unit &amp; Shower Facility.</li> <li>Trainee will know steps to perform operational tests, service, and periodic maintenance on the Bath Unit &amp; Shower Facility.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>Any safety violation is an automatic failure</li> </ul>	

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**PERFORM OPERATIONAL TESTS  
SERVICE/PERIODIC MAINTENANCE**

**Background:** There are not a lot of tasks to perform to periodic maintenance on a shower and shave unit. So if you stick to the manufacturer's checklist for maintenance tasks, you should have very little trouble with your unit.

*To perform these tasks, complete the lesson(s) in CD-ROM, Bath Unit & Shower Facility, 3E4X1-26.3.2.4C*

**NOTE:** After completing these lessons, see your Unit Education and Training Manager to take the following **mandatory** Certests:

<b><u>Test no.</u></b>	<b><u>Title</u></b>
<b>8050</b>	<b>PBU100 Bath &amp; M1950 Shower QTP – Lesson 2</b>
<b>8051</b>	<b>PBU100 Bath &amp; M1950 Shower QTP – Lesson 3</b>

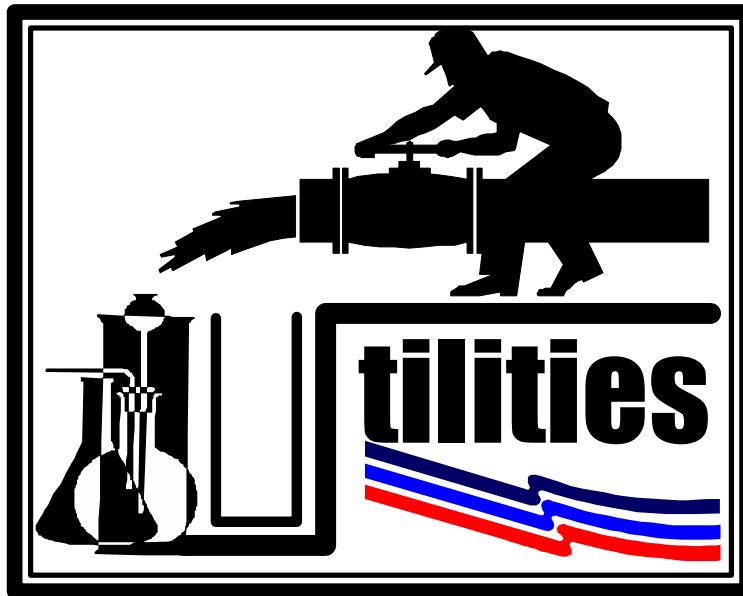
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**PERFORM OPERATIONAL TESTS  
SERVICE/PERIODIC MAINTENANCE**

Performance Checklist		
Step	Yes	No
1. Was trainee able to perform operational tests, service, and periodic maintenance?		
2. Is trainee able to name major components of the Bath Unit & Shower Facility?		
3. Does trainee know what T.O. to use with the Bat Unit & Shower Facility?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## PORTABLE SHOWER UNIT (M1958) & (PBU100)

MODULE 26

AFQTP UNIT 3

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TROUBLESHOOTING (26.3.2.4.4.)

REPAIRS (26.3.2.4.5.)

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## TROUBLESHOOT REPAIRS

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.4.4., Troubleshoot 26.3.2.4.5., Repairs
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Bath Unit &amp; Shower Facility, 3E4X1-26.3.2.4C</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will have the knowledge to Troubleshoot the Bath Unit &amp; Shower Facility.</li> <li>• Trainee will have the knowledge to perform Repairs on the Bath Unit &amp; Shower Facility.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the Bath Unit &amp; Shower Facility.</li> <li>• Trainee will know steps to Troubleshoot on the Bath Unit &amp; Shower Facility.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

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## TROUBLESHOOT REPAIRS

**Background:** As with anything manmade, problems will occur periodically. When they happen, it will be up to you to correct these problems. Using the manufacturer's instructions will help you quickly troubleshoot the problem and then make necessary repairs

*To perform these tasks, complete the lesson(s) in CD-ROM, Bath Unit & Shower Facility, 3E4X1-26.3.2.4C*

**NOTE:** Before you take this **mandatory** Certtest, complete the lessons Service/Periodic Maintenance, Task Number 26.3.2.4.3, Troubleshooting and Repairs, Task Numbers 26.3.2.4.4. and 26.3.2.4.5 in CD-ROM Bath Unit & Shower Facility, 3E4X1-26.3.2.4C

**Test no.**  
**8054**

**Title**  
**PBU100 Bath & M1950 Shower QTP – Lesson 6**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**TROUBLESHOOT  
REPAIRS**

Performance Checklist		
Step	Yes	No
1. Does the trainee know the steps to follow for troubleshooting?		
2. Does the trainee know how to repair the Bath Unit & Shower Facility?		
3. Was the trainee able to follow the T.O. while doing the repair?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## FIELD DEPLOYABLE LATRINE

**MODULE 26**

**AFQTP UNIT 3**

### SET UP (26.3.2.5.1.)

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## SET UP

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.5.1., Set up
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2</li> <li>• TO 35E35-5-1</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Multimeter, Carpenter's level, Wrench</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of the Field Deployable Latrine set up.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the Field Deployable Latrine.</li> <li>• Trainee will know steps to perform set up of the Field Deployable Latrine.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

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**SET UP**

**Background:** The field deployable latrine consists of two latrine units (6 toilets each), and a pumping unit. The pumping unit consists of an electric motor, centrifugal water pump, check valve, diaphragm pump, pressure switch, and pressure gauge, suction hoses, two supply hoses and associated fittings. When the electric motor operates, water is drawn from the water tank through the suction hose and check valve and delivered to the latrine units via the supply hoses. The check valve, in conjunction with the pressure switch and diaphragm pump, ensures a constant operating pressure of 20 to 40 psi. The pressure gauge permits external monitoring of system pressure. The latrine units (2 per complete installation) include the 6 flushable toilets (mounted to the latrine floor), a urinal trough, two sinks, waste tank and base assembly. Sink faucets, urinals, and toilets used on the latrine units are timed devices, dispensing only a measured amount of water with one activation of the push button/valves. The field deployable latrine is designed for field use and can be set up and used in less than 30 minutes.

**NOTE:**

Latrine is normally set up inside tent or small building, thus providing some degree of privacy toward the front and rear. Privacy curtains are provided on each side and between adjacent commodes.

Latrines must be positioned to allow sufficient access space on each side.

TO 35E35-5-1 *Field Deployable Latrine Assembly* is required to complete this QTP.

***To perform these tasks, complete the lesson(s) in CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2***

**NOTE:** In the CD-ROM there are tests after each section. Complete each section and answer the questions.

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SET UP

Performance Checklist		
Step	Yes	No
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is used for the field deployable latrine?		
3. Did trainee understand how to setup components of the kit?		
4. Did trainee know appropriate distances for placing components?		
5. Did trainee identify key components of the field deployable latrine?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## FIELD DEPLOYABLE LATRINE

MODULE 26

AFQTP UNIT 3

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### DISASSEMBLE (26.3.2.5.2.)

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## DISASSEMBLE

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.5.2., Disassemble
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2</li> <li>• 35E35-5-1</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC.</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Utilities Tool Kit</li> <li>• Pumper Truck</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of the Field Deployable Latrine disassembly.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the Field Deployable Latrine.</li> <li>• Trainee will know steps to perform disassembly of the Field Deployable Latrine.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## DISASSEMBLE

**Background:** Disassembly of the field deployable latrine is not as simple as reversing the assembly process. Care should be taken to ensure each item is removed safely while avoiding damage. Cleaning, sanitizing and storing properly will aid the lifespan of the unit.

*To perform these tasks, complete the lesson(s) in CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2*

**NOTE:** In the CD-ROM there are tests after each section. Complete each section and answer the questions.

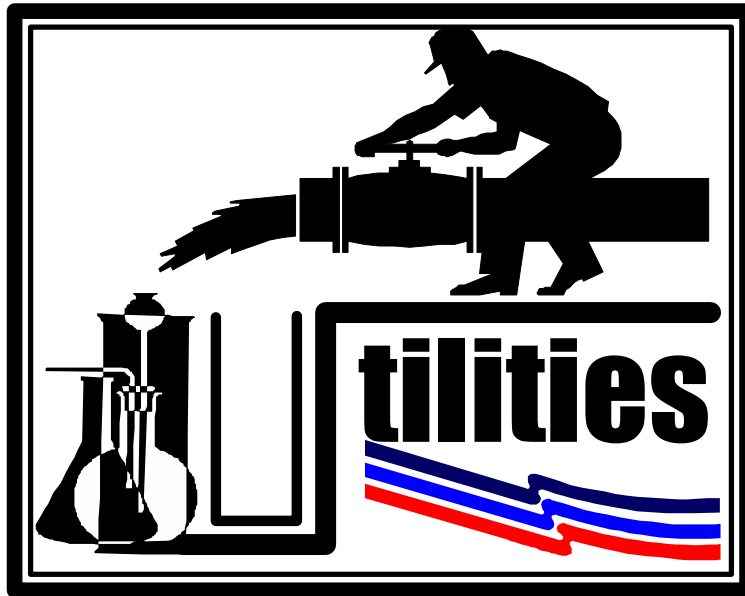
**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

### DISASSEMBLE

Performance Checklist		
Step	Yes	No
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is used for the field deployable latrine?		
3. Did trainee understand how to disassemble components of the kit?		
4. Did trainee state cleaning and sanitation for applicable components?		
5. Did trainee know storage procedures for each component?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



## FIELD DEPLOYABLE LATRINE

**MODULE 26**

**AFQTP UNIT 3**

**MAINTAIN (26.3.2.5.3.)**

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## MAINTAIN

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.5.3., Maintain
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2</li> <li>• TO 35E35-5-1</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC.</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Utilities Tool Kit</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic knowledge of the Field Deployable Latrine maintenance.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the Field Deployable Latrine.</li> <li>• Trainee should know steps to perform maintenance on the Field Deployable Latrine.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

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## MAINTAIN

**Background:** For the most part, the field deployable systems will operate with few problems (if maintained properly); however, “Murphy’s Law,” or “what can go wrong will go wrong,” must be considered in the same breadth of mechanical equipment.

*To perform these tasks, complete the lesson(s) in CD-ROM, Field Deployable Latrine 3E4X1, 3E4X2*

**NOTE:** After completing all lessons for Field Deployable Latrine, see your Unit Education and Training Manager to take the following **mandatory** Certest.

**Test no.**  
**8135**

**Title**  
**Field Deployable Latrine**

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

**MAINTAIN**

<b>Performance Checklist</b>		
<b>Step</b>	<b>Yes</b>	<b>No</b>
1. Did trainee identify all the equipment needed for the job?		
2. Did trainee know what TO is used for the Field Deployable Latrine?		
3. Did trainee understand each function of the Field Deployable Latrine?		
4. Did the trainee follow step-by-step procedures?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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## **WATER PURIFICATION EQUIPMENT/REVERSE WATER OSMOSIS WATER PURIFICATION UNIT (ROWPU)**

**MODULE 26**

**AFQTP UNIT 3**

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### **SET UP (26.3.2.7.1.)**

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**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## SET UP

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.7.1., Set-up
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC.</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Utilities Tool Kit</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will understand basic Set-up knowledge of the ROWPU.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the ROWPU.</li> <li>• Trainee will know steps to perform Set-up of the ROWPU.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## SET UP

**Background:** The Reverse Osmosis Water Purification Unit (ROWPU) is a deployable water treatment facility designed to provide potable water to an air wing in field conditions. It provides for water purification for, showers, laundries and kitchens.

*To perform this task, complete the lesson(s) in CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.*

**NOTE:** After completing this lesson, see your Unit Education and Training Manager to take the following **mandatory** Certests.

<u>Test no.</u>	<u>Title</u>
8037	ROWPU Qualification Training Package – Lesson 1
8038	ROWPU Qualification Training Package – Lesson 2

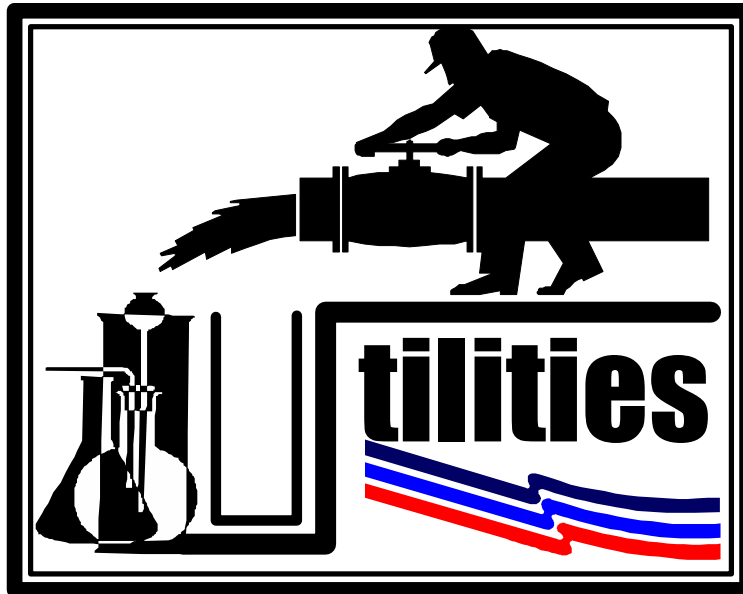
**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

SET UP

Performance Checklist		
Step	Yes	No
1. Is the trainee able to name major components of the ROWPU?		
2. Does trainee understand basic set-up procedures of the ROWPU?		
3. Can the trainee set-up the ROWPU?		
4. Did the trainee know what T.O. to use with the ROWPU?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



**WATER PURIFICATION EQUIPMENT/REVERSE  
WATER OSMOSIS WATER PURIFICATION UNIT  
(ROWPU)**

**MODULE 26**

**AFQTP UNIT 3**

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**OPERATE (26.3.2.7.2.)**

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## OPERATE

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.7.2., Operate
<b>Training References:</b>	<ul style="list-style-type: none"> <li>• CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.</li> </ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"> <li>• Possess as a minimum a 3E431 AFSC.</li> </ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"> <li>• Utilities Tool Kit</li> </ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"> <li>• Trainee will have basic operation knowledge of the ROWPU.</li> </ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"> <li>• Trainee will be able to name major components of the ROWPU.</li> </ul>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li> <li>• Any safety violation is an automatic failure</li> </ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## OPERATE

**Background:** In order to operate a ROWPU there must be a raw water source capable of furnishing enough water to supply the number of personnel for the amount of time that they are deployed to the location.

*To perform this task, complete the lesson(s) in CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.*

**NOTE:** After completing this lesson, see your Unit Education and Training Manager to take the following **mandatory** Certest.

**Test no.**  
8039

**Title**  
ROWPU Qualification Training Package – Lesson 3

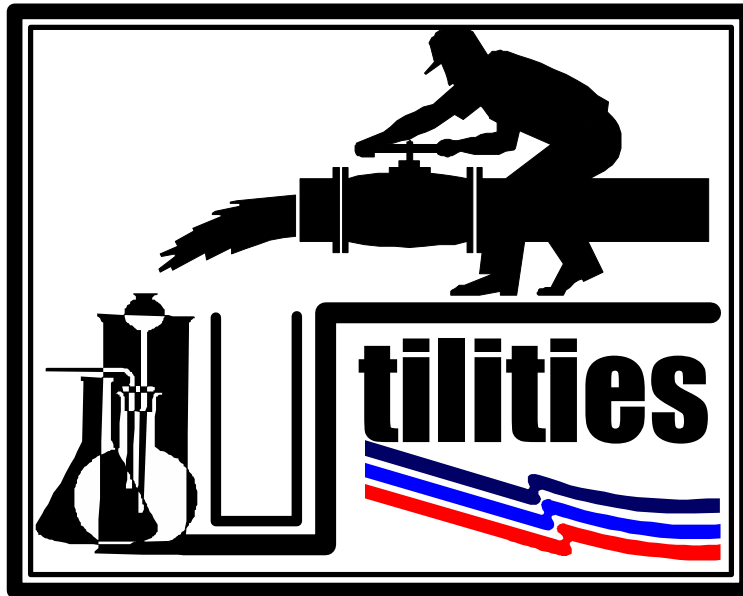
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## OPERATE

Performance Checklist		
Step	Yes	No
1. Does the trainee understand the operation of the ROWPU?		
2. Can the trainee describe the operational steps?		
3. Was the trainee able to follow the T.O. for operation of the ROWPU?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.



**WATER PURIFICATION EQUIPMENT/REVERSE  
WATER OSMOSIS WATER PURIFICATION UNIT  
(ROWPU)**

**MODULE 26**

**AFQTP UNIT 3**

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**MAINTAIN (26.3.2.7.3.)**

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## MAINTAIN

### *Task Training Guide*

<b>STS Reference Number/Title:</b>	26.3.2.7.3., Maintain
<b>Training References:</b>	<ul style="list-style-type: none"><li>• CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.</li></ul>
<b>Prerequisites:</b>	<ul style="list-style-type: none"><li>• Possess as a minimum a 3E431 AFSC.</li></ul>
<b>Equipment/Tools Required:</b>	<ul style="list-style-type: none"><li>• Utilities Tool Kit</li></ul>
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• Trainee will have basic knowledge to maintain the ROWPU.</li></ul>
<b>Samples of Behavior:</b>	<ul style="list-style-type: none"><li>• Trainee will be able to name major components of the ROWPU.</li></ul>
<b>Notes:</b>	
<ul style="list-style-type: none"><li>• To successfully complete this element, the steps must be followed exactly--no exceptions</li><li>• Any safety violation is an automatic failure</li></ul>	

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## MAINTAIN

**Background:** To prevent the Reverse Osmosis Water Purification Unit (ROWPU) from malfunctioning, you must occasionally maintain it. Various maintenance tasks need to be scheduled according to the amount of time the unit has been in operation. It will be up to you, the operator, to ensure these maintenance tasks are accomplished, so as to keep the ROWPU running efficiently.

*To perform this task, complete the lesson(s) in CD-ROM, ROWPU, Reverse Osmosis Water Purification System, 3E4X1C-26.3.2.*

**NOTE:** After completing this lesson, see your Unit Education and Training Manager to take the following **mandatory** Certests.

<b><u>Test no.</u></b>	<b><u>Title</u></b>
<b>8040</b>	<b>ROWPU Qualification Training Package – Lesson 4</b>
<b>8041</b>	<b>ROWPU Qualification Training Package – Lesson 5</b>
<b>8042</b>	<b>ROWPU Qualification Training Package – Lesson 6</b>

**Notice.** This AFQTP is NOT intended to replace the applicable technical references nor is it intended to replace hands-on training. It is to be used in conjunction with these for training purposes only.

## MAINTAIN

Performance Checklist		
Step	Yes	No
1. Does the trainee understand how to maintain the ROWPU?		
2. Can the trainee describe the maintenance steps?		
3. Was the trainee able to follow the T.O. for maintenance of the ROWPU?		
4. Did the trainee follow all the safety procedures?		
5. Does the trainee understand the proper maintenance procedure in the event of a sudden power loss or unit shutdown?		
6. Does the trainee understand the importance of maintenance on the ROWPU?		

**FEEDBACK:** Trainer should provide both positive and/or negative feedback to the trainee immediately after the task is performed. This will ensure the issue is still fresh in the mind of both the trainee and trainer.

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